

GP-304071

## HYDROTAPPING POWER UNIT

## ABSTRACT OF THE DISCLOSURE

A hydrotapping power unit is disclosed that is operable to position and hold a hydrotapping tool in a home position adjacent a part while the part is being hydroformed in a die cavity, to then advance the tool to pierce a  
5 hole in the hydroformed part while the part remains in the die cavity and under pressure and then continue to advance the tool to inwardly extrude the part about the hole, to then further advance while also rotating the tool so that the tool is fed at a feed rate equal to the thread pitch of the tool to thereby form a thread in the pierced hole, and finally to retract while also  
10 rotating the tool but in the reverse direction and at the same feed rate to release the tool from the threaded hole. The power unit performing these operations includes a linearly moveable shaft for holding the tool, a powered device for rotating the shaft, a powered device for linearly moving the shaft, and a lead screw connection between the latter powered device and the shaft  
15 having a thread pitch equal to that of the tool.